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ABSTRACT

A study compared the informal theories about the child held by 10 preservice education students with those held by 8 educational leaders with experience in the elementary grades. During interviews, students and educators were asked to define "the child" in everyday terms. They were also asked to categorize and respond to 32 statements about what the child is like or can do. Interviews were tape-recorded and transcribed, then analyzed for themes and topics. Respondents tended to espouse an existential philosophy of the child as a particular kind of entity, possessing uniqueness, self-awareness, decision-making power, and vulnerability. Both experienced and preservice educators expressed existential ontologies, but the experienced educators did so more consistently. The few nonexistential comments were made almost exclusively by preservice students. This heavy commitment to viewing the child in an existential manner may cause important misunderstandings when education students are exposed to formal, academic theories of learning and development in their teacher education programs. The study report includes a review of the literature on informal theories, a discussion of the implications of study findings, and the 32 statements about the child that were used in the interviews. (AC)

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Conceptions of *The Child* Among Novices and Leaders in Elementary Education

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RUNNING HEAD: Conceptions of the Child

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Abstract

Informal theories exist for many realms of everyday knowledge and activity, and contribute to misconceptions when students learn formal, academic theories in teacher education programs. The nature of the misconceptions differs, however, according to the philosophical status of the field to which they refer. In science education, misconceptions can be viewed as ontological misclassifications of key concepts: events are misconstrued as things, for example, or vice versa. In studies of the child, such as educational psychology, misconceptions may stem from commitment to a particular kind of ontology, one based on humanistic existentialism. Qualitative interviews of education students and experienced leaders in elementary education suggest that an existentialist commitment is already present among preservice students, but becomes better articulated among leaders. Humanistic existentialism may lead to important misunderstandings of children's learning and development, and therefore poses a special challenge to teacher educators in designing courses and curricula on these topics.

Conceptions of the Child Among Novices and Leaders in Elementary Education

Theories, it seems, are not the sole property of academics, but are created by everyone, no matter their age or background. Informal theories develop early in childhood about areas as diverse as physical mechanics, biology and human thinking (Carey, 1988; Keil, 1989; Wellman, 1990). Even though they are informal, everyday beliefs about these topics qualify as "theories" because they consist of concepts with mutually dependent meanings, and because changes in one informal concept or principle necessitate changes in others (Overton, 1983, 1988). The beliefs are also theory-like in having core ideas which resist disproof, as well as peripheral ideas which change readily in the face of evidence.

Informal theories are important for educational leaders, and especially teacher educators, because they may account for the difficulties encountered by future teachers and their students in learning formal, academic concepts and theories. In science classes, for example, a high school student may persistently confuse the notions of *heat* and *temperature*, in spite of repeated efforts by the teacher or a curriculum author to distinguish these concepts in simple, but scientific terms. Everyday theories of energy tend to equate the two concepts, whereas scientific thermodynamics makes important distinctions between them--with *heat* referring to an amount of energy, and *temperature* to a rate of energy flow (Weiser, 1989). Many students do not begin making this distinction simply by reading about it or by being told of it. If they acquire it at all,

they do so only slowly, by developing a scientific theory of energy to replace, or perhaps overlay, their prior informal theory.

The concepts that develop out of informal theories present teacher educators with dilemmas in preparing future teachers. Should such concepts be ignored? Or critiqued (respectfully) wherever they occur? Or somehow used as a basis for better (that is, more academically formal) concepts and theories? The answers depend on the nature of informal theories and concepts, and on their meaning in the thinking and activities of individual education students.

Chi (in press), Keil (1979, 1989), Sommers (1971), and others have proposed a framework for accomplishing this purpose. They argue that informal concepts can be understood in terms of their ontology, or implicit philosophy of being. In this framework, individuals assign informal concepts to one of three fundamental categories of being: material substances, events, and abstractions. Material substances include both natural kinds (e.g. plants and animals) and artifacts (e.g. manufactured objects); events include both intentional processes (e.g. eating) and constraint-based processes (e.g. the operations of a clock); and abstractions include both emotions (e.g. fear) and cognitions (e.g. mathematical concepts). Evidence for the psychological importance of these categories comes from several sources, such as responses to semantic category mistakes (Keil, 1979): a cow cannot be "one hour long," for example, because cow is a material substance and one hour long is a quality of an event. Mixing terms and predicates from different ontological categories creates anomalies that are psychologically meaningless. Serious, lasting

misunderstandings can develop in school when students assign key concepts to the "wrong" basic category.

Whatever its overall merits for teacher education, Chi's ontological taxonomy does account for important misunderstandings in fields that are well-structured and scientific. In reviewing her own and others' work, Chi (in press) points out that high school science students frequently interpret scientific terms as properties of objects, when in fact they should interpret the terms as constraint-based events. Gravity, for example, is believed to be "in" the object called earth, rather than "in" a rule-governed relationship between the earth and other objects such as the moon. This ontological category mistake leads to pervasive and persistent lack of comprehension of gravitational laws.

Do teacher educators also encounter ontological category mistakes in preservice education students? While it may be tempting to think so, there are important differences between the field of teacher education and those usually taught in introductory high school science classes. One difference is the open-ended quality of teacher education: the object of study, the child, is ontologically composite or hybrid. As Descartes asserted long ago, a *person* (presumably including a *child*), is both a body and a mind, both material object and idea (Sommers, 1971). When children are studied developmentally, furthermore, they may also become processes or "events." Learning about a concept like *the child* may therefore be prone not so much to semantic misclassification, as in science education, but to what might be called "underclassification"--a failure to view the child from a multiplicity of ontological perspectives.

Keil has argued somewhat the same point in reviewing studies about children's knowledge of natural kinds and artifacts (1989, Chapters 12 and 13). In developing both of these two kinds of concepts, for example, children may form theories that contain both rule-based principles and low-level, arbitrary associations at the same time: an informal *theory of the car*, for example, may include not only principles of mechanics, but also ad hoc associations about tail fins and body colour. In an analogous way, an informal *theory of the child* may contain not only rule-like beliefs about how children typically think, feel and act, but also contain isolated facts about slang expressions currently in vogue, specific TV shows enjoyed by children, or activities of particular children.

In ontologically composite fields, the result may ironically be that experts consider their knowledge to be less coherent or organized than do novices. Awareness of complicating factors, mitigating circumstances, and exceptions to the rule creates the trend: as experts learn more of these, they act as if they know "less," meaning less that is general, abstract, and reliably governed by rules. Wineburg (1991) demonstrated this phenomenon for expert and novice historians: those with Ph.D.'s and research experience were much less certain that they understood a sample historical document than were high school students responding to the same document. Their think-aloud protocols showed, however, that caution came not so much from true lack of knowledge, as from a different ontological belief about their knowledge. The experts in particular regarded history as embodied or contained in real people and events, albeit distant ones. The novice high school students, however, saw history as ideas "in" the documents and text samples which they read.

Of course, characterizing the field of child development as ontologically open-ended or composite may be misleading. Perhaps its key concept, *the child*, should be seen not as hybrid, but as a particular, ontologically pure sort of "natural kind," such as studied by Gelman and Baillargeon (1983), Keil (1989), and others. In this line of research, natural kinds are entities that always beget others of the same kind: cats are natural kinds because they give birth to cats, not to dogs or horses. Natural kinds also have a distinct historical origin or lineage: a lilac bush made over to look like a rose bush, for example, is still really a lilac bush in spite of appearances, because it originated as a lilac.

Since human beings, including children, certainly have these qualities, knowledge of children may therefore be knowledge of a particular sort of natural kind. But humans have an additional ontological quality not shared by other natural kinds, namely self-consciousness of their own existence. Humans are not merely alert to their surroundings; they are aware of their alertness and of its implications. This fact is the key starting point of all existentialist and other philosophies of "existence" (Macquarrie, 1973; Vandenberg, 1991). A *person*, according to this view, is a creature that not only experiences its world, but also makes decisions and choices in it. As a result, a *person* is fundamentally unique, dynamic and evolving over time. A *person* is also fundamentally finite: he or she cannot be sure of making wise choices, and cannot be sure of constructing an authentic life, one true to himself or herself. In the end, furthermore, a *person* always dies, and knows that this will happen even in advance of the event.

To the extent that a *child* is a person, misconceptions of *the child* may therefore involve misclassifying this existentialist natural kind into some other fundamental ontological category.

At its mos. minor, misclassifying might be equivalent to likening *the child* to an animal--sentient, but unreflective. At a more radical level, it might be equivalent to thinking of *the child* as an inanimate "thing," or as a process or abstraction. These ontological classifications, but especially the latter ones, would allow thinking of *the child* not only as something uniform and predictable, but even as something that can be manipulated or experimented upon, without regard to its response. From an existentialist viewpoint, therefore, misclassifying *the child* might be not only wrong, but potentially unethical or dangerous.

Presumably persons highly experienced with children, such as parents or veteran teachers, cur.iculum developers, or other educational leaders, would be the least likely individuals to misclassify the concept of *the child* in these ways. They would have adopted the most fully existential definition of *child*, with its attendant difficulties in generalizing about typical or average children. Like the expert historians studied by Wineburg, experts about children may have decided that the "real child" does not exist "in" journal articles or research studies, but behind and beyond the articles and studies. Child experts' apparent humility would come not from having diversified their ontological commitments, as described earlier, but from having focused them more fully. Compared to novices, persons highly experienced with children would have adopted a more truly existentialist ontology.

Misconceptions of *the child*, then, can be explained in either of two ways: as failures to place *the child* in enough different ontological contexts, or as failures to place *the child* in one crucial ontological category, that of existential natural kinds. The first sort of failure might be called the "insufficient diversity" hypothesis; and the second, the "existentialism" hypothesis. The

second is most analogous to the semantic category mistakes described for scientific concepts, in which a key concept is mistakenly attributed to an anomalous ontological category, and therefore coupled with meaningless predicates--as when "speed" or "acceleration" is attributed to a specific object, rather than to an event relating two objects.

As pointed out at the beginning of this article, determining the nature of misconceptions makes important differences to teacher educators responsible for instructional and curricular planning. In assessing misconceptions of *the child*, the hypothesis of insufficient diversity suggests that education students need, and teacher educators must provide, multiple perspectives on what children are like: that children are not only biological organisms, for example, but also "events" lasting literally for years, as well as "ideas" constructed by the people in particular children's lives. The existentialism hypothesis, on the other hand, suggests that teacher educators need to support the development of existentialism in preservice students, while at the same time searching for bridges between existentialist and the more empirical and scientific ontologies of *the child* embedded in much of the research literature on children's learning and development. This is a significant decision for teacher educators, affecting the design of courses in educational psychology and other related areas of teacher education programs.

For all of these reasons, we undertook the research reported here, research designed to clarify the philosophical nature of misconceptions of *the child*. In the beginning, we were guided by two main questions: 1) Do misconceptions exist in non-scientific fields, comparable to those that have been found in science education studies? 2) If they do exist, do they take forms analogous to those found in science, or are they fundamentally different in form as well as

content? The nature of the questions required investigating individuals' philosophical notions of *the child*, and this need in turn dictated the qualitative methods described in the next section.

Methods of Study

Participants

Participants in the study were ten preservice education students and eight educational leaders with experience in the elementary grades. The preservice students averaged 21 years old, and ranged from 19 years to 35 years. They were enrolled in a Bachelor of Education program at the University of Manitoba, where they were taking the elementary and/or early years sequence of courses. None had significant experience as teachers in public or private schools. A few had had limited experience, though, in specialized teaching outside schools, such as in giving swimming lessons, dance instruction, or camp counseling. Individuals were recruited by inviting volunteers from sections of an introductory education course in the Faculty of Education.

The experienced leaders averaged 31 years in age, and ranged from 26 years to 48 years. Their school experience correlated with their age closely, averaging eight years, but ranging from 3 years to 25 years. All had worked as an elementary classroom teacher for much of their careers, though most now worked as elementary school counselors, resource teachers, or curriculum consultants for elementary schools. They were recruited by word-of-mouth nominations from among graduate education students in the Faculty of Education at the University of Manitoba.

Procedures

All individuals were interviewed about their beliefs and ideas about the nature of "the child." Interviews were carried out by one or the other of the authors. After preliminary conversation to get acquainted and to learn basic information about the interviewee, the participant was asked to define "the child" in everyday terms, and in any way he or she wanted. Since making this definition served in part as a warm-up task, we also invited the person to add to or elaborate on it again at the end of the interview, following a card-sorting task described below. The initial definitions took about 5 minutes to explain.

After creating an initial definition, individuals were asked to sort and respond to a set of 32 cards, each of which contained one statement about what "the child" is like or can do (see Table 1 for a list of the statements). The statements were selected on the basis of prior published studies of informal concepts of *the child* (Seifert, 1991, 1992). These were in turn based on theoretical predictions about the possible ontological commitments that individuals might have about the concept of *the child*. As the participants in this study themselves pointed out, the final list of statements contained a diverse mix, ontologically: some statements referred to *the child's* physical qualities, some to processes of change, and some to life as experienced by *the child*. Many also could be construed in more than one of these ways.

Individuals were invited to group the 32 cards in any way they found meaningful, without restrictions as to the number or composition of individual groups of cards. This task took about ten or fifteen minutes for most persons, after which the interviewer asked the person to explain the basis for his or her groupings. Interviewee and interviewer went through the cards in detail, with the interviewee commenting on how he or she had understood particular cards and on why

he or she had grouped them with particular others. The interviewer confined his or her comments to asking for clarifications and inviting elaborations of initial comments. Discussing the cards took about 30 minutes on the average, but ranged from 15 minutes to 45 minutes. Afterwards, as the final step in the interview, the interviewee was again encouraged to define "the child."

Analysis

Interviews were tape-recorded and transcribed in their entirety. Both investigators then reviewed the transcriptions independently, looking for themes and topics to characterize each interviewee's informal views about *the child*. These initial analyses were oriented to discovering categories, terms, and concepts embedded in the interviews, and expressed in the interviewees' own language. They provided ways of characterizing the interviewees' individual theories and ontological commitments. The "data" at this point took the form of post-hoc field notes about each interview, and of marginal glosses or annotations distributed throughout each transcript.

Following initial, independent analyses, the investigators discussed the transcripts jointly, comparing the categories, terms, and concepts which each had constructed with those found by the other investigator. Discrepancies were discussed until a coherent, mutually agreeable portrayal of the interviewee's theories and ontology emerged. The results of the consultations led to categories, terms, and concepts that guided the analysis of further transcripts, and which tested the adequacy of the earlier categories, terms, and concepts. As analysis of transcripts proceeded, certain concepts and ontological ideas emerged that proved meaningful for interpreting many, or even all, of the interview transcripts. These formed the basis for the final results,

described in the next section. All in all, the analytic procedure closely resembled the "method of constant comparison" described in the literature on case studies and qualitative methods (e.g. Goetz and LeCompte, 1984; or Merriam, 1988).

Results

The interviews produced 411 pages of transcribed dialogue. Participants produced an average of seven groupings of the cards about *the child*, but ranged from only two groupings to as many as ten. Groupings were formed in highly individual ways, but did tend to reflect the theoretical basis on which the task was constructed in previous studies. Most participants created a category of cards related to *the child's* physical qualities, for example, and many made categories reflecting how children change as they grow. These categories reflected the ontologies of material objects and of events, respectively, similar to those found in prior studies and discussed earlier in this paper.

In this study, however, we were not as interested in participants' groupings of the cards, as in their explanations for the groupings. The inductive, constant comparative method used to analyze the explanations eventually produced six categories or themes of explanatory comments. These are listed in Table 2 along with explanations of each category. The frequencies with which each category occurred are listed in Table 3. Note that since interviews varied in length, the frequencies of each category were higher for longer interviews. To compensate for this bias, the frequencies of each category have been multiplied by the ratio of a "standard," 30-minute interview to the actual interview's duration, thus making the frequencies more comparable. Note, too, that an occurrence of a category was counted as a section of transcript discourse in which

a participant talked continuously about the theme of the category without a change of topic. Thus defined, occurrences varied from one sentence to about ten sentences (150 words), but averaged about four sentences.

The tables clearly suggest an underlying philosophy of *the child* consistent with existentialism. Respondents spoke as if *the child* were a particular kind of entity, one possessing the signs of a human or existential natural kind: uniqueness, self-awareness, decision-making power and vulnerability. Their comments were not ontologically diverse, as hypothesized earlier, but ontologically coherent. Table 4 gives a sense of their coherence--a sense of the existential *child*--by listing examples of the categories.

Both experienced educators and preservice students expressed existentialist ontologies, but the experienced educators did so more consistently. As Table 3 indicates, non-existentialist themes were expressed almost entirely by the preservice students, and even then in relatively few instances. Non-existentialist comments took the form of emphasizing *the child's* ignorance and passivity ("They don't know much and sure are dependent"), for example, or the impossibility of children making mistaken choices or of experiencing suffering ("Kids get what they need, no matter what we do"). Such comments were rare, however, forming only about 10% of the comments by preservice students, and only about 3% of the comments by experienced teachers.

In addition, the preservice teachers and experienced educators differed significantly in the frequency of two categories. The first was Category #1, "Decision, choice and self-construction of the child." The experienced educators supported this category significantly more ($p<.05$) than did the preservice teachers, implying a more existentialist ontology of *the child* than the

preservice teachers. The second difference was Category #5, "Awareness of finitude/Dangers of betraying potential." The experienced educators also supported this category significantly more ($p<.05$) than did the preservice teachers, again implying a more existentialist ontology of *the child* than the preservice teachers.

These results suggest that commitment to existentialism may increase as individuals move from the status of preservice teacher to that of experienced elementary educator or curriculum consultant. But the development is not dramatic, and to a large extent existentialism apparently simply "exists" throughout educators' professional careers, at least in the field of elementary education. By the time someone becomes a preservice elementary education student, an existentialist perspective is already largely in place, and further training and experience with children merely makes a person more consistent and articulate in expressing it. This possibility is confirmed by the significantly greater speed ($p<.01$) with which experienced educators performed the card-sorting task (22.7 minutes on average), compared to preservice students (33.8 minutes). Most of the extra time for the preservice students was spent explaining and clarifying the individual cards ("This must mean X, or perhaps Y"), rather than in expressing additional views or alternate ontologies. Overall, the students were almost as existentialist as their elders. This finding, as noted in the discussion below, has important implications for understanding misconceptions of *the child* in teacher education programs.

Implications

The heavy commitment to viewing *the child* existentially may cause important misunderstandings when education students learn about theories of learning and development, and

the misunderstandings may simply become more likely as existential commitment grows during careers in education. The educational psychology taught in teacher education programs does not often use the individual, human "existent" as its root metaphor, but instead uses non-human biological organisms, machine-like mechanisms, or physical causes, depending on the topic and theoretical context (Overton, 1983). A classic example of the biological metaphor is the work of Piaget; an example of a mechanical metaphor is contemporary information processing theory; and of physical causation is behavioral theory. Each of these viewpoints takes a different ontological starting point than existentialism, and requires understanding *the child* as a sort of entity consistent with non-existentialist assumptions.

A brief look at psychology textbooks used in teacher education programs supports this assessment. One such text makes the following statement, for example, about the acquisition of Piagetian conservation of liquid task:

> The child is asked if the amount of liquid in the tall, thin beaker is equal to that which remains in one of the original beakers. If the child is less than 7 or 8 years old, she usually says no and justifies her answer in terms of the differing height or width of the beakers. Older children usually answer yes and justify their answers appropriately ("If you poured the milk back, the amount would still be the same"). The older child can mentally reverse actions; the preoperational child cannot. (Santrock and Yussen, 1991, p. 272).

This paragraph is offered in an organismic context: in a prior passage, the authors argue that Piagetian changes, such as this one, should be likened to the growth of an embryo or organism,

that Piaget had been a biologist before studying human development, and that certain processes (assimilation, accommodation, equilibration) refer to a patterned interplay analogous to biological growth. Because of these provisos, the paragraph about conservation is academically accurate--at least for individuals who already grasp the relevant ontological distinctions between existential kinds, other natural kinds, artifacts, and causal forces.

The results of the present study, however, suggest that neither novice teachers-to-be nor leaders in elementary education can be counted on to make these crucial ontological distinctions. Instead, the results suggest that they may tend to construe key ideas about children, including Piagetian ones, in existential terms. Conservation may therefore be viewed as a "decision" or free choice by the child to begin conserving. Viewed as a choice or decision, however, conservation loses its intended meaning as an indicator of another key idea, *stage*, which is supposed to refer to a universal, hierarchical and inevitable change in children's thinking. If children can "decide" to conserve, then some children may decide not to conserve, turning Piagetian stage sequences into statistical tendencies, not developmental necessities. While some psychologists, as a matter of fact, happen to subscribe to a statistical notion of *stage*, and some preservice students may eventually adopt it themselves, the students should not be encouraged to learn it unthinkingly on the basis of ontological misunderstanding.

Some educational psychology texts adopt a relatively humanistic style, of course, than do others--one more compatible with existentialist ontologies. But the rhetorical effect of a humane-sounding style does not guarantee that a major concept like *conservation* will be understood as it was originally intended by its creators. "Humanistic innuendos" may even mislead

humanistically minded students still further. Consider this explanation of conservation, for example, taken from a university text with a relatively humanistic slant--a perspective explicitly acknowledged and intended by the author in the preface to the book:

> [In responding to Piaget's liquid beakers task,] almost every child younger than 6 says the taller glass contains more, because preschool children use the schema that taller is bigger. They are unshakable in this conviction, even when the experimenter points out that the taller glass is narrower and that the amount of water in each of the original identical glasses was obviously the same. Most children older than 7, on the other hand, have developed the schema that Piaget called **conservation of liquids**: that is they realize that pouring the liquid into a taller glass does not change the amount of liquid. They remain steadfast in this conviction even when the experimenter attempts to convince them otherwise. (Berger, 1986, p. 55).

Technically, this explanation is consistent with Piagetian theory: a schema is invoked at a certain age, and children's comments are in line with classic Piagetian predictions. But the rhetorical effect may be misleading: children not only "say" things, as in the earlier excerpt, but also "realize" invariance and "remain unshakable and steadfast in conviction" about conservation in the face of pressure to conform to other opinions. Such language implies that conservation is not just an objective event, but a human experience. It seems to involve not just the patterning of growth, as when a plant comes into flower, but actual awareness of dilemma and choice. Compared to the explanation in Santrock and Yussen, this explanation is therefore more

compatible with the existentialist stance of the students and teachers interviewed in the current study, and in this sense may be more comprehensible. By the same token, though, the passage may conceal the organismic, but non-existentialist spirit of Piagetian theory as much as it communicates it.

Other examples from university textbooks used to teach learning and development to teachers are not hard to find. Operant conditioning can be seen as a "choice" to seek reinforcement, rather than as a causal relationship between one observable event (the operant) and another (the reinforcement). In information processing theory, the limitations of short-term memory can be seen as a "dilemma" over what experiences to attend to at any one moment, not as the inherent limitations on a logic device. And so on. In most cases, the textbook explanations are technically accurate in portraying these ideas. A reader familiar with the scientific ontology of causality or of biological organisms will have little trouble interpreting the relevant passages in the ways intended by the creators of the theories and concepts. In the cases just cited, in particular, *the child* will become a variable mediating among operants and reinforcements, or between short-term and long-term processors. Results of the present study, however, suggest that preservice students and experienced leaders in elementary education may either not choose or not be able to understand *the child* in this light. Instead, they will understand all statements about "the child" as referring to an experience, the experience of human existence. In doing so, they are likely to misconceive many important ideas of psychology applied to teaching.

These implications for teacher education are still possibilities, not facts. We do not really know that students and elementary teachers "overhumanize" theoretical explanations of child development; we only know that they might, and we know some possible reasons, based on the interviews reported here. Investigating the implications of existentialism for text learning is necessary, and also seems eminently possible, for example, using think-aloud protocols or some similar method to assess education students' and experienced educators' ontological understanding of academic developmental concepts. Such protocols should clarify the extent and nature of ontological misconceptions about learning and development, and therefore suggest revisions in conventional ways of teaching these topics.

Support for these possibilities does exist in the literature. In comparing theories from educational psychology textbooks with theories expressed by cooperating teachers, Pinnegar and Carter (1990) found that the teachers' ideas focused on three general themes: 1) issues of responsibility to and respect for students, 2) issues of achieving students' confidence and trust, and 3) issues of finding or generating personal interest and relevance. Teachers emphasized that students were individuals and were decision-makers, whereas the texts they analyzed implied that "the student" and "learning" have generic, universal characteristics. While the framework of their study was not explicitly existentialist, their findings are consistent with this ontological perspective, as well as with the findings and interpretations we have offered here.

Another recent study (Kagan and Tippins, 1991) explored the beliefs of preservice teachers about their pupils. It found that novices doing elementary student teaching invested themselves relatively heavily in their descriptions of pupils, meaning that they speculated rather

fully about pupils' motives and feelings, and included themselves in anecdotes to describe the pupils. Novices planning on secondary education showed relatively little of these two qualities. This study, too, did not operate from an explicitly existentialist framework, but its results are consistent with the view adopted by the participants in this study, who stressed "the child" as a psychologically active individual, and not as someone for whom generalizations are either possible or important.

The existentialist ontology of the teachers found in our interviews suggests a partial explanation for results like those of Pinnegar and Carter, and of Kagan and Tippins. It also suggests that studies documenting such philosophical commitments more fully will be important for improving teacher education. The studies will not, however, resolve a long-standing issue of educational leadership, one with moral implications: which knowledge about children is most worth knowing, and who indeed is an expert about the nature of "the child" (Seifert, 1991). Is it the developer of curricula in teacher education, in the form of authors of textbooks in educational psychology and related fields? Or it is the experienced educator, the committed existentialist? Exercising leadership in preparing teachers may require choices and compromises between these groups, a sort of existential dilemma in itself.

Table 1:

Descriptions of *The Child* Used in Interviews

1. *The child* is short and small.
2. *The child* sleeps more than an adult.
3. *The child* behaves differently than an adult.
4. *The child* thinks differently than an adult.
5. *The child* feels things differently than an adult.
6. *The child* is a quality in everyone.
7. *The child* changes as he or she gets older.
8. *The child* is a little person.
9. *The child* looks like you or me.
10. *The child* is proportioned slightly different from an adult.
11. *The child* is incomplete.
12. *The child* has not learned skills to take care of him or her self.
13. *The child* does not exist in the abstract.
14. *The child* is a deep and profound person.
15. *The child* is a rather helpless individual.
16. *The child* is rather dependent on his or her parents.
17. *The child* acquires different needs as he or she grows.
18. *The child* is part of many relationships.

19. *The child* grows toward a unique destination.
20. *The child* grows at a unique speed.
21. *The child* can be understood better by being a parent.
22. *The child* can be understood better by being a teacher.
23. *The child* is in the process of creating himself or herself.
24. *The child* is someone you really have to believe in.
25. *The child* is primarily an individual.
26. *The child* is something that we perceive or construct.
27. *The child* is primarily a member of the family.
28. *The child* is large and tall.
29. *The child* has boundless energy.
30. *The child* stays much the same as he or she gets older.
31. *The child* learns faster than an adult.
32. *The child* learns more slowly than an adult.

Table 2:

Categories Used to Explain *The Child*

Theme or Category	Explanation
1. Decision, Choice, & Self-of the Child	The child can decide things, choose meaningfully. They get what they need from situations.
2. Uniqueness of the Child	Every child is different. You cannot generalize about children. If generalizations exist, they are not important.
3. Proper Assessment of Child's Thinking	The child thinks and/or feels with subtlety and perceptiveness. The process of thinking or feeling counts, not its contents.
4. Completeness/Worthiness Child	The child is complete as a human being, and therefore deserves respect. Conversely, the need for growth or development is shared with adults, and thus does not show a lack or deficit.
5. Awareness of Finitude and Responsibility	The child is vulnerable to abuse, both subtle and blatant. It is always possible that the world will

	not allow the child to reach his/her potential.
6. Knowledge Through Personal Perspective	You only know a child from some particular, personal perspective, based on a relationship. Knowledge of the child is not "objective."

Table 3:

Frequencies of Themes for a "Standard" (30-Minute) Interview

Theme or Category	Novices (N=8)	Experts (N=7)
1. Decision/choice	2.9	4.9*
2. Uniqueness	5.3	5.0
3. Proper assessment	1.8	2.6
4. Completeness/respect	5.7	7.5
5. Finitude/betrayal	1.8	4.5*
6. Knowledge/perspective	2.7	2.0
Mean length of intrvw.:	33.8 minutes	22.7 minutes

* $p<.05$. All other differences are not significant.

Note: Since variations in interview length affect the frequencies of individual categories, each frequency was multiplied by the ratio of a hypothetical "standard" (30-minute) interview to the actual interview length; i.e. [Expressed frequency in table = (Actual frequency) x (30 minutes)/(Actual interview length)]

Table 4:

Examples of Themes

Theme or Category	Example
1. Decision/choice/ self-construction	Cheryl: "I think that [children] have created themselves, but they adapt themselves....So it's like the process of creating himself or herself in order to survive."
	Kathy: "I find [children] very curious about everything around them, they like to find out about things."
2. Uniqueness	Jane: "Teachers have so many problems because [kids] are all so individual and they all need different kinds of motivation and growing at different speeds. So it's hard to keep track of children."
	Bonny: "Everybody's unique, and there's no set time for anything. Where and when, and even what they become--it's all different."

3. Assessment of	Darryl:	"The people who have made child's thinking me think the most have been children, and the comments they've made. They are very profound people."
	Darren:	"[Children] can think about what's right and wrong just as well as you and me. We don't give them enough credit."
4. Completeness/ worthiness of respect	Rudy:	"I like to look at children, especially the kids that I work with as, well, my friends, as sort of being beside me. I teach them but I think they teach me every day as much if not more."
	Carly:	"I don't think of a child as incomplete. I think every person is always, continuously developing, and growing in different ways, and I think a child is no more incomplete than anybody else is."
5. Finitude/potential	Julia:	"A lot depends on your situation. If you're from a poor family and have to go out and work at 14. It all

	depends, and sometimes things work out better for some people."
	Darren: "I think children are very vulnerable because they're smaller physically and don't have any power. I think it's really difficult not to abuse power...and it's important to recognize how easy it is to dominate or control someone who's smaller."
6. Knowledge through personal perspective	Corinne: "You can look at it from a parental point of view, or a teacher's point of view, or a sibling's point of view. There's so many different points of view coming to play [in understanding children]."
	Annie: "A child is different [in the eyes of] parents. Different in each relationship--teacher, friends. No one sees him the same."

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